

UNITED STATES OF AMERICA  
NATIONAL TRANSPORTATION SAFETY BOARD  
OFFICE OF MARINE SAFETY

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In the Matter of:

MAJOR MARINE ACCIDENT	* NTSB Project ID
COLLISION JAPANESE FISHERIES	* No. 51701
TRAINING VESSEL EHIME MARU AND	* DCA01MM022
U.S. NAVY NUCLEAR ATTACK	*
SUBMARINE USS GREENEVILLE	*

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Friday,  
March 15, 2002

INTERVIEW OF:

CAPTAIN ANDY BORCHARDT, USN

PRESENT: TOM ROTH-ROFFY  
BARRY STRAUCH

1 P R O C E E D I N G S

2 MR. ROTH-ROFFY: Okay. The date is 15 of  
3 March, 2002, the time is about 1400 hours. We are here  
4 at the Pearl Harbor Naval Station to continue our  
5 investigation of the collision of the U.S.S.  
6 Greeneville.

7 Joining us in interview this afternoon are,  
8 is Mr. Barry Strauch of the NTSB. And, sir, would you  
9 please introduce yourself.

10 CAPTAIN BORCHARDT: Yes, Captain Andy  
11 Borchardt. I am the Deputy Chief of Staff for  
12 Logistics and Maintenance for the Submarine Force  
13 Pacific Fleet. And I have been in this capacity for  
14 about eight months.

15 MR. ROTH-ROFFY: Okay. With that, Barry, if  
16 you want to go ahead and start the questioning.

17 MR. STRAUCH: Okay. Captain Borchardt, you  
18 mentioned the difference between your field view and  
19 the corporate view, so if you could explain that to us.

20 CAPTAIN BORCHARDT: Well, there is not really  
21 a difference between my field view and corporate view.

22 When we talk about the Naval Nuclear Propulsion  
23 Program, I certainly would give the operational  
24 perspective and if there are any deeper corporate

1 issues that would want to be addressed and those should  
2 appropriately be addressed to Naval Reactors back in  
3 Washington, D.C.

4           The Navy Nuclear Propulsion Program, we will  
5 call it NNPP, has shown a long history, over 50 years,  
6 of safe reactor operation. A lot of the information  
7 is laid out with respect to how the program works, and  
8 what the historical background is and what we call this  
9 gray book here, which is basically the description of  
10 the Navy Nuclear Propulsion Program. And some of the  
11 key points in there, talk about over 5200 safe reactor  
12 years, 120 million miles, steamed, safely, under Navy  
13 Nuclear Propulsion. The program does, in fact, cover  
14 aircraft carriers, and, and submarines, nuclear  
15 aircraft carriers. And basically all the support  
16 structure that was, that would be required to maintain,  
17 design, improve, trouble shoot problems or issues. All  
18 that infrastructure is pretty much essentially  
19 controlled with an overarching central technical  
20 authority, which would be Naval reactors headed by  
21 Admiral Lowman, who is the fourth head of Naval  
22 Reactors.

23           This program was started by Admiral Rickover  
24 back in 1948, that is when it started.

1           So, we have a very long history in a program  
2   that stresses technical competence, individual  
3   responsibility, formal procedures. And when I say  
4   procedures, not just things you do, but how you prepare  
5   to do them in the way, in the way we prepare to do an  
6   evolution, how we do pre evolution, critiques and  
7   things like that. So, it is a program that is founded  
8   in specific formal procedures, changes to those  
9   procedures. There is a formal way of doing that. How  
10   we approach before we even start into an evolution.  
11   And then if we have any type of problems in that  
12   evolution, how we go back and determine through a  
13   critique, in a formalized process of what went wrong,  
14   that is establishing the facts, what was the underlying  
15   reasons for those problems that came out, and how do we  
16   go ahead and address not repeating them. In other  
17   words, what would be short term corrective actions or  
18   long term corrective actions.

19           So, I have used, I have used the term formal  
20   on several occasions, very, very strict approach to the  
21   issue of reactor safeguards and properly operating  
22   propulsion plan.

23           There is no distinction between my, my, I  
24   would say operational view as opposed to the Naval

1     Reactor's corporate view, from the standpoint of, you  
2     know, where I, where I fall out on this, but, certainly  
3     from the standpoint of programmatic of the whys, that  
4     would be something that would be more appropriately  
5     addressed with them.

6             As far as the hows and the whats, and how  
7     would procedures work, then, then clearly I have a good  
8     perspective of that.

9             Now, in my job as the Deputy Chief of Staff  
10    for Maintenance and Logistics, I would say this is a  
11    key aspect of my job, but I am responsible, if you  
12    will, for repair across the entire force. It is not  
13    just the, any type of nuclear reactor or nuclear  
14    reactor associated issues. It is the entire spectrum.

15            I would say a lot of the principals that we  
16    use in Navy Nuclear Propulsion Program clearly are  
17    principals that have, that have, that are interwoven  
18    into how we operate submarines.

19            Maintenance and safety and control  
20    procedures, we have a process called a "Tagout System",  
21    which is how we isolate either electrically or  
22    mechanically a particular area so that we can do  
23    maintenance on it. Those systems are identical. It  
24    is the same. Not just how we isolate it and how we

1 administer that system, and how we qualify people to  
2 know how to use it, but also how we authorize  
3 maintenance to be performed after that. It is not just  
4 good enough to have two person concept and checked to  
5 verify that the system, the area is isolated, but also  
6 how you get that supervisory involvement in that whole  
7 process to actually sign the dotted line that says  
8 whether it is ship force doing a repair or the  
9 shipyard, or repair activity less than a shipyard. A  
10 formal process of how we authorize the work. Those  
11 procedures I have just described are, are essentially,  
12 there is no difference between them, between the entire  
13 ship.

14 MR. STRAUCH: Now your background includes  
15 both reactors and operations, is that correct?

16 CAPTAIN BORCHARDT: Well, yeah, in our, in our  
17 Navy, unlike some of the other Navys, the folks that,  
18 the officers that supervise are trained specifically  
19 with respect to how to operate the reactor plan. That  
20 is how they basically start out for the most part.  
21 When they come into submarines, they start out with  
22 basically a one year program, where they formally get  
23 trained on theoretical aspects for the first half of  
24 that, and then they actually qualify on a land base

1 nuclear power plant prototype of the, that simulates,  
2 well, not simulates, it does many of the same things  
3 that we talk about in actually operating at sea. Same  
4 principals, but you actually go through, before you  
5 even get to a submarine at sea, you go through this,  
6 this very vigorous training program. A lot of it, you  
7 know, it is a lot really gradual level degrees,  
8 certainly for the officers. But, it takes about a  
9 year, and that is before you even think about going to  
10 a submarine, typically. And all our officers onboard  
11 the attack submarines, with the exception of the supply  
12 officer, are nuclear trained officers. So, your  
13 typical wardroom would have 13 or 14 officers, and of  
14 those, all but one typically would be nuclear trained.

15 So, they all do that as a foundation, those  
16 basis that I talked about, formality. After that an  
17 officer would go to submarine school, where you would  
18 learn some of the basics about how the submarine part  
19 of this thing works. And for me, and that was back in  
20 1975, that was about six weeks long. I am not sure how  
21 long it is right now, but, Captain Kyle's folks could  
22 give you more specifics on the submarine training  
23 school, I suppose.

24 And then you go out and you start over on a

1 ship. And you go through the whole process of learning  
2 that particular reactor plant and you only have a  
3 couple of different types that were operating in the  
4 various classes of submarines we have. The same thing  
5 would apply to a carrier, but I am not that versed in  
6 carrier, other than from the nuclear side. It is  
7 essentially the same process.

8 And then you go through that same process to  
9 qualify on that reactor plan, on that submarine. And  
10 once you have done that, the typical officer coming in,  
11 then you would start working on qualifying as diving  
12 officer of the watch, officer of the deck, the forward  
13 watch stations. And that whole process, I would  
14 believe, based on my experience, would take about a  
15 year to qualify on the propulsion plant and then  
16 qualify on the fore part of the ship.

17 MR. STRAUCH: It would take about a year for  
18 each?

19 CAPTAIN BORCHARDT: About a year total, once  
20 you have arrived to your ship, approximately, to  
21 qualify. Once again, that has been my experience, a  
22 little bit behind on some of the forward end  
23 qualification, training procedures.

24 MR. STRAUCH: So, it is about a year on land,



1 and then another year at sea, where you are qualifying  
2 for the forward aspects of the submarine at sea.

3 CAPTAIN BORCHARDT: It is about a year on  
4 shore, for, I am talking officers now.

5 MR. STRAUCH: Right.

6 CAPTAIN BORCHARDT: Qualifying on a Navy  
7 Nuclear Propulsion system, on land, about a year, the  
8 first half theoretical, second half practical, and then  
9 it is about anywhere from three to six months, my  
10 experience, an officer would come onboard and would  
11 qualify in the propulsion plant as watch officer back  
12 there, which we would call engineering officer of the  
13 watch. And then the next, I would say four to eight  
14 months, to go through your qualifications to learn how  
15 to basically drive the submarine and get, those kind of  
16 experiences to ultimately qualify as officer of the  
17 deck. So, I guess what I want to emphasize is really  
18 founded in this, a lot of the principals, that is where  
19 you start at. You start at the Navy Nuclear Propulsion  
20 Plant, or Navy Nuclear Propulsion Program Basic  
21 Principals, so, I guess I would emphasize the key there  
22 is qualification of personnel, rigid qualification  
23 before they got to the ship. That is one of the basic  
24 pillows.

1           After that, I alluded to procedures and  
2       strict formalized procedures and verbatim compliance  
3       with those procedures, formal preparation to perform  
4       the procedures as in briefs, formal critiquing  
5       afterwards, if there are any issues, so that you get to  
6       the bottom line of what the problems were, and you  
7       figure out how to make sure you peak this.

8           MR. STRAUCH: Now, does this progression  
9       change at all in your experience, progression of what  
10      you just described?

11          CAPTAIN BORCHARDT: Has it changed?

12          MR. STRAUCH: Yes, progression of training.

13          CAPTAIN BORCHARDT: I don't think, I don't,  
14      you know, I am not really qualified to address that. I  
15      would say from the time I reported onboard my first  
16      submarine in 1976, until I left my last submarine,  
17      which I commanded, was U.S.S. Asper in 1992, in those,  
18      those, what 17, 16 years, I guess, really the basic  
19      fundamental process as I understand it, has been the  
20      chain, has been constant.

21          MR. STRAUCH: Okay.

22          CAPTAIN BORCHARDT: If there are, you know,  
23      new procedures in place over the last few years, two or  
24      three or four years, those would better be addressed

1 with the N-7 folks, who would better understand that.

2 MR. STRAUCH: Okay.

3 CAPTAIN BORCHARDT: But, the basic principal  
4 of qualifications through the Propulsion Plant, really  
5 hasn't fundamentally changed as far as I know since the  
6 program was conceived. And it started when Nautilus  
7 was commissioned.

8 MR. STRAUCH: Okay. Can you, while we are on  
9 the subject, can you walk us through your career with  
10 the Navy?

11 CAPTAIN BORCHARDT: Sure. I graduated from  
12 the Naval Academy in 1974. I was, I went through this  
13 Navy Nuclear Propulsion training. It took me about a  
14 year. Went to submarine school, it took me, as I said,  
15 about a month and a half, maybe two months, I forget.  
16 And as you get married somewhere in the middle of that.  
17 I spent three years on Fast Tech Submarine out of San  
18 Diego, called the Pollick. I went from there to New  
19 London, Connecticut where I was an EB as new  
20 construction on Lahoyer. I spent two years there. And  
21 I went directly from there and went to engineer on the  
22 Sam Houston, which was a, used to be a trident, excuse  
23 me, a strategic missile submarine, but back in the  
24 '70s, when we were going through the STAR treaties and

1 stuff, they were converting some of the old strategic  
2 missile submarines to where they still had a lot of  
3 effective life yet, left, but we were limited to so  
4 many tubes and so back then some of the old strategic  
5 missile submarines were basically converted into attack  
6 submarine. So, I was engineer on the Sam Houston for a  
7 little over two years. And then with three submarines  
8 in a row, they showed mercy on me and I went to Naval  
9 Post Graduate School in Monterey and got a Master's.  
10 After that I was Executive Officer on a fast tech  
11 submarine in San Diego called the Flasher for two and a  
12 half years. And I went through there, which is another  
13 key part of the training aspect of the Navy Nuclear  
14 Propulsion Program, in that interim, also on your first  
15 submarine, which I should have mentioned. On your  
16 first submarine you actually qualify as engineer  
17 officer for Navy Nuclear Propulsion Plant of the  
18 submarine. That is one of the requirements to finish  
19 your junior officer's tour. So, you go through that  
20 qualification. That is a real rigorous qualification,  
21 where you actually go back to Headquarters, back in, it  
22 used to be Crystal City, now it is the Navy Yard, Naval  
23 Reactors and you actually go through interviews,  
24 written exams, and then you get either qualified or

1 not.

2 As I said, I was Executive Officer on Flasher  
3 for four years. And, excuse me, for, for two and a  
4 half years. Then I went from there to six months of  
5 perspective commanding officer training. The first  
6 half of that, the first three months was back at  
7 Headquarters, going through more advanced training on  
8 reactor operations and more in depth on the propulsion  
9 plant. And you do that for three months, and then you  
10 do three months of like tactical type training. So,  
11 there is a six month school before you go, become a  
12 commanding officer.

13 And then I was commanding officer on Asper  
14 out here in Hawaii, which is a great place to be a  
15 commanding officer on a submarine out of, usually. And  
16 I was commanding officer on there for 33 months. Since  
17 then I have had, I left there in February '92 and I  
18 have had one, two, a couple of staff jobs, and then I  
19 was commanding officer of the Maintenance Facility out  
20 here in Pearl Harbor. I left here, went to the  
21 National Work College, was lucky enough to get my  
22 second Master's. And then they sent me to the Joint  
23 Staff. So I was in the Pentagon for two years up until  
24 May of this year. And then I reported to this job as

1 Deputy Chief of Staff in July. So, that takes me all  
2 the way up. It doesn't sound like much, but all that  
3 filled out 27 and a half years. That is it, that is  
4 me.

5 MR. STRAUCH: What was your Master's Degree in  
6 at the Post Graduate School?

7 CAPTAIN BORCHARDT: Post Graduate School was  
8 Weapons Engineering, basically with a minor in Physics,  
9 Physics and Acoustics type of focus, the Weapons  
10 Engineering Program and then National Work College was  
11 National Security --

12 MR. STRAUCH: Can you walk us through your  
13 chain of command, who you report to and who he reports  
14 to?

15 CAPTAIN BORCHARDT: My chain of command here?

16 MR. STRAUCH: Yes.

17 CAPTAIN BORCHARDT: Sure. My chain of command  
18 is, I am the Deputy Chief of Staff for Logistics and  
19 Maintenance, and then I work for Admiral Padget, who  
20 has a chief of staff, Captain Brandherbert. So, I  
21 basically work for those two. But, Admiral Padget is  
22 the one that is, that signs my performance evaluation,  
23 fitness report.

24 MR. STRAUCH: Okay.

1 CAPTAIN BORCHARDT: And then I believe Admiral  
2 Padget's direct boss, I believe, is Admiral Fargo at  
3 STPAC Fleet. And then from there, STPAC Fleet, I  
4 believe his boss is STPAC, DACOM, Admiral Blair, who  
5 works for what used to be called Unified Command  
6 Authority, and since the Unified Sync is a war fighting  
7 Sync, he works, I believe directly for the Secretary of  
8 Defense, with certainly some administrative chain of  
9 command with the Chairman of the Joint Chiefs of Staff.  
10 And did I confuse you, guys?

11 MR. ROTH-ROFFY: No, Tom Roth-Roffy here. I  
12 was wondering if you have any reporting relationship to  
13 Naval Reactors in Washington, directly or does  
14 everything go through --

15 CAPTAIN BORCHARDT: No, I have an operational  
16 chain of command here and from the standpoint of how,  
17 how this all fits in with the Naval Reactors' portion,  
18 that would be the Central, if you will, Technical  
19 Authority, and nobody at Naval Reactors physically  
20 signs my fitness report. So, my, my operational  
21 commander is Admiral Padget, who signs my fitness  
22 report.

23 MR. STRAUCH: Does Admiral, is anybody in  
24 Admiral Bowman's chain of command based here at Pearl

1 Harbor?

2 CAPTAIN BORCHARDT: He does have Naval  
3 Reactors representatives located at the public  
4 shipyards that do Naval Nuclear maintenance, if you  
5 will, Nuclear Power Maintenance. That would be  
6 Newport Naval Shipyard, Portsmouth Naval Shipyard,  
7 Pearl Harbor Naval Shipyard, and Puget Sound Naval  
8 Shipyard and I believe you all were just up in the  
9 Seattle area.

10 MR. STRAUCH: Correct.

11 CAPTAIN BORCHARDT: That is over in Puget  
12 Sound. So, there is four public yards that do reactor  
13 servicing and repairs in maintenance on nuclear  
14 submarines. Two of those yards also do repairs and  
15 maintenance on nuclear carriers. And in each of those  
16 four yards, there is on site a Naval Reactors  
17 representative. I don't report to him. I talk to him  
18 on occasion.

19 MR. STRAUCH: Okay.

20 CAPTAIN BORCHARDT: But, not in my chain of  
21 command.

22 MR. STRAUCH: Okay. Him being the  
23 representative of Nuclear Power?

24 CAPTAIN BORCHARDT: Him, I believe he reports



1 directly to Mr., well, Admiral Bowman, I believe he  
2 reports directly to him and it has to do with how the  
3 shipyards do their business. I think that is his  
4 primary focus.

5 MR. STRAUCH: Okay. And you said earlier, you  
6 referred to different types of things and is it fair to  
7 say you are referring to reactors and not vessels or  
8 are there different types of reactors within the  
9 Nuclear Reactors? I just want to clarify what my  
10 understanding of what you said.

11 CAPTAIN BORCHARDT: Well, all of our, all of  
12 our, all of our reactor plants are essentially the same  
13 or the same design in here, but there are different  
14 iterations for the various plants, 688s have two  
15 different, Los Angeles class submarines, excuse me,  
16 688s, Los Angeles class submarines have basically two  
17 different types of propulsion plants. The second half  
18 of the class approximately being more advanced design,  
19 so, as technological developments are made, we put more  
20 capable power plants and that is what I meant to say.  
21 But, fundamentally, there are not a fundamental  
22 differences.

23 MR. STRAUCH: Okay. That is what I expected.  
24 Well, it has been alleged to us that there

1 are two different cultures in nuclear sub, the aft  
2 culture, the reactor and the forward culture of the  
3 operations part. What are your comments on that?

4 CAPTAIN BORCHARDT: Well, I don't think there  
5 has been two different cultures. As I said, we have  
6 two, excuse me, we have the basic core of the, of the  
7 officers that man our submarines are nuclear trained.  
8 Their foundation is nuclear trained, as they go on to  
9 different things. In fact, my focus on my second job  
10 was not necessarily the reactor plant focus on Lahoyer,  
11 it was, I was the navigator and weapons officer in a  
12 new construction submarine. Even though I was  
13 involved in the propulsion plant training and things  
14 like that, my focus wasn't necessarily there. My very  
15 next job, I was the chief engineer. My focus was very  
16 much there. As the executive officer, I had a very  
17 strong engineer and so my focus was assisting the  
18 commanding officer a lot in, in forward areas. And  
19 then as a CO, I mean, it goes in, fits and starts, if  
20 you would, where your focus is. So, from the officer's  
21 standpoint, there is definitely not two cultures.

22 Now, you do have different levels of training  
23 for different parts of the crew. And you have a cadre  
24 of, I am ball parking the numbers, maybe, maybe 45 to

1       50 nuclear training enlisted folks, who have gone  
2       through a similar one year program before they even got  
3       to sea, that the officers do go through.   Half  
4       theoretical and level of knowledge, the other half  
5       practical before they even get to their submarine.  
6       There are a little over 50 percent, I would say, ball  
7       park of the crew that do not, that do not go to that,  
8       that go to specialized schools for sonar men.  
9       Specialized schools for radium or ET, Electronic  
10      Technicians, weaponeers.

11               So, is there a difference in the educational  
12      basis of the 125 or 130 folks on the submarine?   Yes.  
13      Is there a difference in standards?   I would say no.   I  
14      think many of the, as I alluded to earlier, certainly  
15      the maintenance and, and safety issues, how we go about  
16      doing that business, it is essentially identical.

17               MR. STRAUCH: Are there such a thing as  
18      standing orders that would pertain to the operation of  
19      a reactor?

20               CAPTAIN BORCHARDT: Standing orders, yes, your  
21      average ship would have a set of standing orders, that  
22      would be engineer standing orders,

23               MR. STRAUCH: Okay.

24               CAPTAIN BORCHARDT: And commanding officer

1 would have a set of standing orders that, for the most  
2 part, should address some issues with respect to  
3 operational propulsion plant.

4 MR. STRAUCH: Okay.

5 CAPTAIN BORCHARDT: I am not sure now what the  
6 specific guidance is on commanding officer's standing  
7 orders with respect to what areas he must address.  
8 There may be some instruction that addresses that, but,  
9 mine addressed, you know, some aspects of operational  
10 propulsion plant, from the commanding officer's  
11 perspective, and the engineer would have his own set of  
12 standing orders.

13 MR. STRAUCH: What is the difference between  
14 the engineer's standing orders and the CO's standing  
15 orders, as they pertain to the reactor?

16 CAPTAIN BORCHARDT: Philosophically none. I  
17 would say the granularity would be different. The  
18 engineer's standing orders would be much more specific,  
19 whereas my standing orders wouldn't address every  
20 little aspect of what you do as commanding officer. It  
21 would address these are key issues that I would want to  
22 be informed of, this is where I stand, this is what I  
23 give permission for, this would be what the engineer  
24 gives permission for. This is my, these are my

1 thresholds, my trip wires, my specific tailoring of how  
2 I want to run my ship and how, what trip wires, if you  
3 will. Trip wires, I don't mean to sound trip wires  
4 from the standpoint of problems, but, you know, my  
5 specific thresholds of where I expect people to ensure  
6 they have my involvement. How is that?

7 MR. STRAUCH: Okay.

8 CAPTAIN BORCHARDT: The specific rules now on  
9 standing orders and what will be in them, and I don't  
10 really have a good knowledge of that. So I am speaking  
11 historically from the standpoint of standing orders,  
12 how we did that.

13 MR. STRAUCH: Okay. The engineer's standing  
14 orders, would they vary from engineer to engineer or  
15 they are established by Admiral Bowman's Office?

16 CAPTAIN BORCHARDT: You know, no, there is no  
17 set of standing orders that comes out from the  
18 standpoint of, you know, here it is, sign the bottom  
19 line and make your people work it. We have, we have  
20 lots of technical documents and instructions that lay  
21 out specific areas, if you will, that are requirements  
22 to focus. And you, I believe, I believe the engineers  
23 still basically tailor their, their engineering  
24 standing orders to that. But, they would all cover the

1 same type of foundation, if you will, I believe. And  
2 you know, I have only ridden a couple of submarines in  
3 this job, and really I looked at one, one set of  
4 engineer's standing orders when I rode and it seemed  
5 pretty consistent with the way I am used to it having  
6 been done in the past.

7 MR. STRAUCH: Okay. Are you familiar with the  
8 details of the Greeneville, Ehime Maru collision?

9 CAPTAIN BORCHARDT: As far as the actual  
10 mechanics of what happened and what went wrong?

11 MR. STRAUCH: Yes.

12 CAPTAIN BORCHARDT: Up until and then during  
13 the collision?

14 MR. STRAUCH: Yes.

15 CAPTAIN BORCHARDT: I know that, I know of  
16 many of the details. I have looked at in the past some  
17 of the lessons learned when things came out.

18 MR. STRAUCH: Okay.

19 CAPTAIN BORCHARDT: I just happened to be at  
20 the time the, the, in charge of Political Military  
21 Affairs for the Asian Region and J-5 on the Joint Staff  
22 when this happened. So, I was certainly trying to get  
23 as many details as I could, because I was getting  
24 pumped quite a bit by the Japanese Embassy and several

1     other folks. So, that is kind of where, it just so  
2     happened being a submariner, I was in the Political  
3     Military end at the time, but I was also very much in  
4     demand.

5             But, as far as some of the problems that  
6     happened on the ship, I think I am aware of some of  
7     those, and some of the, maybe some of the fundamental  
8     breakdowns, I am kind of aware of. I am certainly not  
9     an expert, but from stepping back and not having been  
10    involved in the studies and stuff, I have a basic  
11    understanding.

12            MR. STRAUCH: One of the things that I think,  
13    well, one of the things I think that came across in our  
14    reading of the events was that the, Commander Waddle  
15    didn't adhere to a number of the standing orders that  
16    he had established on the vessel.

17            MR. ROTH-ROFFY: Let's go ahead and take a  
18    break here momentarily to switch the tape over.

19            (Tape 1 Side A ended.)

20            MR. STRAUCH: And that was a target of  
21    interest by the Board of Inquiry. Did Commander  
22    Waddle violate any Naval procedures by not adhering to  
23    his own standing orders?

24            CAPTAIN BORCHARDT: I am not aware of that.

1 MR. STRAUCH: Okay.

2 CAPTAIN BORCHARDT: As far as Navy  
3 regulations?

4 MR. STRAUCH: Yes.

5 CAPTAIN BORCHARDT: I am not an expert on  
6 that. I am not. Did he make mistakes? My assessment  
7 is he made mistakes as a commanding officer, but, as  
8 far as, the Board of Inquiry would give the best  
9 results on what he actually violated.

10 MR. STRAUCH: You are aware that he, that he  
11 did not adhere to his own standing orders?

12 CAPTAIN BORCHARDT: I believe from the  
13 standpoint of how long he searched as well as some --

14 MR. STRAUCH: Briefings.

15 CAPTAIN BORCHARDT: Briefings, yes. am aware  
16 that there were problems there. I didn't know  
17 specifically if that was delineated in the standing  
18 orders or not, but I am aware of those two issues, that  
19 I think he had problems with.

20 MR. STRAUCH: Okay. Is it your understanding,  
21 did Commander Waddle have the authority to disregard or  
22 not adhere to the standing orders at that time?

23 CAPTAIN BORCHARDT: I am not sure. Did he  
24 have the authority? I think the commanding officer in



1 my mind, never has the authority to hazard his vessel.

2 So, once again, I am not an expert on the specifics of  
3 that, but, as a former commanding officer, I think if  
4 you unduly hazard your vessel, you haven't done your  
5 job properly. How about if I answer it that way.

6 MR. STRAUCH: Well, let me ask another  
7 question.

8 Does the Commander have the authority to not  
9 adhere to standing orders governing reactors?

10 CAPTAIN BORCHARDT: Does he have the authority  
11 to not adhere to -- No, I think there is very specific  
12 rules about that. And, you should, and the rules are  
13 very specific and the rules are such that I would say  
14 that they are redundant and give you what flexibility  
15 you might possibly need. And I don't say that in a  
16 cavalier way. This is a war ship. And there are such  
17 things as battle damage in a war environment. And so,  
18 there is very specific rules on operating the ship and,  
19 well, the propulsion plant, certainly. And you need to  
20 adhere by those rules. You don't have the authority  
21 just to arbitrarily change the rules as the engineer or  
22 anything else. But, it is a war ship, and if the war  
23 ship is sinking from battle damage, or if there is, you  
24 know, a threat of losing the ship with all hands dying,

1 a commanding officer certainly would have some leeway.

2 MR. STRAUCH: Okay.

3 CAPTAIN BORCHARDT: To make decisions.

4 MR. STRAUCH: Well, I think it is fair to  
5 say --

6 CAPTAIN BORCHARDT: Does that make sense?

7 MR. STRAUCH: Oh, absolutely. But, I think  
8 it is fair to say on February 9, last year, the  
9 Greeneville was not in a war environment and was not  
10 facing battle damage. In fact, it was a DV embark.  
11 And under those circumstances, Commander Waddle seemed  
12 confident that he could not adhere to his own standing  
13 orders with regard to the operation of the vessel.  
14 Under those circumstances, a DV embark, does the  
15 commander have the authority to not adhere to standing  
16 orders governing nuclear reactor?

17 CAPTAIN BORCHARDT: Governing the nuclear  
18 reactor under that?

19 MR. STRAUCH: Yes.

20 CAPTAIN BORCHARDT: You have specific rules  
21 and specific procedures and stuff and not in a war time  
22 situation, no, you are expected to abide by those.

23 MR. STRAUCH: And in a peace time situation,  
24 are you also expected to abide by them in a peace time

1 situation?

2 CAPTAIN BORCHARDT: Absolutely.

3 MR. STRAUCH: So, there is no circumstances  
4 that you, that you can think of where you would, where  
5 you could not adhere to orders governing the reactors?

6 CAPTAIN BORCHARDT: Well, the specific rules,  
7 orders governing the reactor, as I said, I think there  
8 might be, in a tactical situation in the standpoint of  
9 a war time maybe scenario or something like that, you  
10 probably have some leeway and without getting too  
11 specific. In the situation we are talking about,  
12 operating the ship off of Hawahoo(ph), you wouldn't be  
13 expected or be authorized, if you will, to deviate from  
14 that. The commanding officer is in a very unique  
15 position, since it is a war ship. That doesn't mean  
16 all the rules can go out the window. I wouldn't never  
17 even hint at that. With respect to was he authorized  
18 to deviate from forward procedures of operating a ship,  
19 I would say, I don't know. I don't remember the  
20 specifics on Navy regulations. Certainly, if you are  
21 hazarding your vessel, if I were to hazard my vessel as  
22 a commanding officer, and do things to where I hazard  
23 my vessel and another vessel, I would say I hadn't done  
24 my job properly and I would be held accountable.

1           But, from the standpoint, I don't believe any  
2   of that had to do with operation of the propulsion  
3   plant. So, I am not sure on that one, as far as what  
4   the specific rule is other than I would not consider I  
5   had done my job if I had hazarded my ship.

6           With respect to the propulsion plant, no,  
7   there would be no deviation from requirements or rules  
8   in a situation like that.

9           MR. STRAUCH: But, one of the things you say,  
10   I am kind of curious about, is that the, you said the  
11   commanding officer is an unique position and has, and I  
12   am paraphrasing now, has considerable authority with  
13   regard to deciding how to operate the vessel.

14          CAPTAIN BORCHARDT: Well, no, considerable  
15   responsibility. From the standpoint of how you  
16   operate the ship forward as opposed to, coming to  
17   periscope depth you have procedures, but there are  
18   many, many, many variables in that whole equation.  
19   Okay. How, and I am not, I am not talking about the  
20   Ehime Maru/Greeneville collision. I am talking about  
21   making preparations to bring a ship to periscope depth  
22   from the safe depth, which is a vulnerable time for the  
23   submarine, as you are well aware, given what happened.  
24   How long that evolution takes, depends on a lot of

1 variables. What are the sound conditions in the water?

2 How many contacts are out there? Where are you  
3 operating? And so, that, when I say leeway, there  
4 becomes a, how much is enough given where all of the  
5 contacts, anybody you can hear? There is some  
6 threshold, if you will, of okay, we have got that, it  
7 is time. With operating the propulsion plant, there  
8 are very, really no variables. It is very  
9 straightforward. It reads this and if it reads less  
10 than that, you have a problem. And so, what I was  
11 trying to say, from the standpoint of has a lot of  
12 authority and leeway, I was not trying to hint that he  
13 has the ability to pick and choose what he wants to do.

14 I, I guess I would sense in my experience, operating  
15 as a CO, there was probably more gray areas in  
16 decisions operating the forward end of the ship as  
17 opposed to this finely tuned engineered aft end, and I  
18 think it has to do a lot with the nature of the  
19 business. Once again, I am not an expert forward. I  
20 don't think, I don't see that as two cultures, two  
21 different cultures. I see that as two different sets  
22 of realities on how you operate.

23 Sonar, depends on bending of sound and where  
24 you can hear, is it bouncing off the bottom. It

1 depends on how saturated the operators are with  
2 contacts. It depends on a lot of different areas like  
3 that. How saturated is your party with, with different  
4 evolutions and I am not talking about visitors, I am  
5 talking about different, how saturated is the FT of the  
6 watch, the quartermaster of the watch. Lots of, in the  
7 propulsion plant, very straightforward, unless you are  
8 having a problem, it is very clearly delineated. So, I  
9 don't construe that comment as anything like a  
10 different culture as a different set of parameters, if  
11 you will, expectations, normals.

12 MR. STRAUCH: Yes, and I appreciate that,  
13 because I think that explains, that helps me  
14 understand. But, it sounds, it sounds like the cost of  
15 these gray areas, the front end of the vessel, that a  
16 CO, who was looking for the kind of absolutes that you  
17 have in operating the reactor, would not be successful.

18 CAPTAIN BORCHARDT: No, because, because you  
19 go through a training process over 15 years, in my case  
20 it was a little shorter, that takes you through areas  
21 process and various experiences in operating  
22 submarines. And we don't just, we don't just grow  
23 commanding officers, we lead, we painstakingly grow  
24 them over a 14 or 15 year period. Your average guy

1 operates on four different submarines. I just happened  
2 to go to new construction as my junior officer. And I  
3 would say you will have a junior officer tour, where  
4 you will focus first on the reactor plant, maybe your  
5 first job will typically be as a division officer in  
6 one of the divisions in the propulsion plant and start  
7 learning the forward part of the ship more, getting  
8 experience. And then as a department head, even as an  
9 engineer, which would be typically your next job, after  
10 a short duty tour, you would focus pretty much, if you  
11 are the engineer back aft, but you would still be very  
12 much involved in the overall supervision of the of  
13 operating the ship. Clearly, as an executive officer,  
14 which would typically be your third tour, you would  
15 focus, your responsible just like the captain is, for  
16 say propulsion plant operations, but you would  
17 hopefully be able to focus more of your work on the  
18 overall operation of the ship. And then as CO, never  
19 once given enough responsibility for safe operation of  
20 the reactor plant or the propulsion plant, but once  
21 again, even more broader after all.

22 And so, you go through a process of fine  
23 tuning and honing your skills with respect to operating  
24 the ship.

1           MR. STRAUCH: And throughout that process, it  
2           sounds also like officers who are considered worthy of  
3           commanding a vessel are screened further than those who  
4           are not, are screened out. Is that fair?

5           CAPTAIN BORCHARDT: I think that is fair. I  
6           think we have a competitive nature to our selectivity,  
7           if you will, to our business.

8           MR. STRAUCH: And one of the qualifications,  
9           skills and attributes that you see, that would make an  
10          officer qualified or capable of being selected for a  
11          command versus someone who isn't screened out?

12          CAPTAIN BORCHARDT: High standards. Good  
13          leader. Tactical proficiency. And the process of  
14          going through initial nuclear propulsion plant  
15          qualification, onboard ship's propulsion plant  
16          qualifications, qualifying as engineer, and then going  
17          through the perspective commanding officer pipeline  
18          portion at Naval Reactors, will guarantee that you will  
19          be proficient at safe reactor plant operation. So,  
20          that aspect is very ingrained. But, as you go through  
21          your various steps on the forward end of the ship, you  
22          go through processes. You qualify on submarines.  
23          There is a screening process for those that screen for  
24          department head and not everybody goes to department



1 head. There is a screening process to go to executive  
2 officer and not everybody goes to executive officer.  
3 And that has to do with overall submarine, submarine  
4 capability, I would say. I am not, I am not really  
5 privy to the screening process. It is a screening  
6 board type of process. And then the same thing goes  
7 for commanding officer. So, there are formal,  
8 educational wickets. There are clearly screening  
9 windows that look at it and to ensure that proficient,  
10 qualified and good people go on to ultimately lead  
11 submarines.

12 MR. STRAUCH: Is it fair to say that once you  
13 qualify, an officer qualifies in a submarine, he enters  
14 that pipeline towards command?

15 CAPTAIN BORCHARDT: Well, the whole process,  
16 is it really a pipeline. You start as, you know, you  
17 leave your first submarine when you are, say you are 25  
18 years old, so, are you entering a pipeline that is  
19 going to make you a commanding officer when you are 36  
20 or 37? You are on a career path, that you hope will  
21 ultimately take you to commanding officer a nuclear  
22 submarine, which by the way is the best job I got in  
23 the Navy and I am not complaining about my current job,  
24 but people are aspired to that. They go out and do

1       what we do, that is, that is the big, the big prize.  
2       It certainly was for me. And I would venture to say  
3       every junior officer out there thinks if I am going to  
4       or when he makes a decision of whether he is going to  
5       make the Navy a career or not, he doesn't think am I  
6       going to be a Chief Naval Operations, or I am going to  
7       be an admiral. I think your average guy thinks about  
8       do I like what I am doing, and do I want to be a  
9       commanding officer on a nuclear submarine. That  
10      certainly was what drove me. And I have had some  
11      really good jobs since then, but.

12               MR. STRAUCH: Of those, junior officers that  
13      make the Navy a career, what proportion end up being  
14      selected for commander?

15               CAPTAIN BORCHARDT: I don't have good  
16      specifics on that right now. Captain Kyle could  
17      probably get those from our N-1 personnel here. I  
18      would just be guessing.

19               MR. STRAUCH: Would it be less than 50  
20      percent, do you think?

21               CAPTAIN BORCHARDT: I would think that 50  
22      percent might be a good number, but, once again, I am  
23      just guessing.

24               MR. STRAUCH: Okay.

1                   CAPTAIN BORCHARDT: From start to finish, see,  
2     I don't, the reason I don't have a good answer for you  
3     is because I really don't have a good feel now for what  
4     our officer retention statistics are. The people that,  
5     your basic officer comes in with a six or seven year  
6     obligation, something like that, I think, after Navy  
7     Nuclear Propulsion training. And so, I don't know if  
8     two thirds of those stay in or not. If it two thirds,  
9     which I think is pretty good, once I am not sure what  
10    the numbers are these days. And you look at some  
11    people not going pass their department head, and then a  
12    few not going pass their XO's, 50 percent might be a  
13    reasonable number, but I am not sure.

14                  MR. STRAUCH: Were you familiar with Commander  
15    Waddle before the accident?

16                  CAPTAIN BORCHARDT: Do I know him? I, he was  
17    an executive officer on a submarine in Pearl Harbor, I  
18    don't remember which one, I think it may have been the  
19    San Francisco, but I am not sure, when I was the  
20    commanding officer of the Maintenance Facility. So, I  
21    think I had one interaction with, then Lieutenant  
22    Commander Waddle, when he came to a Material Management  
23    meeting as the commanding officer was on leave or  
24    something. So, he was representing the commanding

1 officer. And I didn't get any impression one way or  
2 the other. No, I don't know him at all.

3 MR. STRAUCH: Okay.

4 CAPTAIN BORCHARDT: Before or after.

5 MR. STRAUCH: Were you aware of any kind of  
6 general reputation that he had at Pearl Harbor?

7 CAPTAIN BORCHARDT: I did not know word one  
8 about Waddle until the collision. In fact, in fact, I  
9 didn't know that that executive officer that I think I  
10 visualized at one management meeting, I didn't know his  
11 name was Waddle until I thought about it. I said, I  
12 saw him on the news, and here is what he looks like and  
13 then I said, "God, that guy looks familiar. What ship  
14 was he XO on?" And then I said, "I remember him,  
15 specifically at one management meeting." But, I didn't  
16 know him from Adam, no.

17 MR. STRAUCH: Okay. Could you cite specific  
18 things that he did wrong, the accident?

19 CAPTAIN BORCHARDT: Cite specific things. I  
20 think that would be a matter of public record, wouldn't  
21 it? Whatever came out of the public record. I mean,  
22 I, I think he was hasty. I think he was very hasty on  
23 how he did it, as I remember the recollection of  
24 events. I think, I think the periscope search was

1       probably too short, wasn't high enough. I think back  
2       of what did he do wrong? I sense without going through  
3       all the specifics, that he wasn't using his team  
4       effectively. So, there wasn't a lot of backup. I  
5       think those were two of the issues. What I think of as  
6       a commanding officer, when I think of a problem that  
7       occurs like this, and kind of being back off in the  
8       background kind of looking through the lessons that  
9       came out of it and stuff, those are the two things that  
10      kind of stick out. But, as far as all the specific  
11      mistakes he made with respect to the tactical guidance  
12      that is out there and the NWP's or other things that are  
13      out there on specific guidance, I don't really have a  
14      specific --

15               MR. STRAUCH: Okay. Tom, do you have any  
16      questions?

17               MR. ROTH-ROFFY: A couple.

18               MR. STRAUCH: Okay. Go ahead.

19               MR. ROTH-ROFFY: This is Tom Roth-Roffy. I  
20      just have a few questions for you, Captain.

21               Are you familiar with operational risk  
22      management and, well, let me just ask you that first.

23               CAPTAIN BORCHARDT: Yes.

24               MR. ROTH-ROFFY: Does it play any role, in

1 your experience, in submarine operations?

2 CAPTAIN BORCHARDT: In my experience, as I  
3 said, well, submarine, I think operational risk  
4 management plays in just about everything we do in  
5 life. Everything we do in life, I would say your  
6 exercising an ORM when you get on the road when it has  
7 been raining a lot. And so I am not hedging your  
8 question.

9 MR. ROTH-ROFFY: Referring to the specific  
10 implementation of a program that was developed by,  
11 well, the Naval Safety Center is kind of managing the  
12 program. Whether or not, you know, you --

13 CAPTAIN BORCHARDT: The specifics of the  
14 formalize aspect of training and does it have an  
15 application? I think that there is a place for ORM in  
16 just about anything we do. It is a question of howl  
17 how formalized, how detailed, how constrictive it is.  
18 Those are all the types of specifics that would need to  
19 be worked out. And then once again, ORM probably would  
20 be a key area that certainly, I would think Captain  
21 Kyle would be the best expert in asking that, but in my  
22 own personal opinion, we do some portion or some form  
23 of operational risk management in many of the decisions  
24 we make whether it is like, like I said, it is driving

1 a car in the rain or whatever. And I think it is  
2 something that, should it be formalized into, I would  
3 like to see the system kind of look at that and  
4 evaluate it from a standpoint of ORM, establishment of  
5 ORM. What is the operational risk management doing  
6 that? I don't mean to kind of mix words at all, but, I  
7 think we have a process to look at that. I believe  
8 that it certainly is a part of the Navy program and the  
9 Safety Centers are involved in it. My Safety Officer,  
10 in fact, just forwarded me an executive brief not too  
11 long ago, that I started chewing through. So, I  
12 certainly feel that there is a need ORM. As far as how  
13 we institutionalize, I will let the institutionalizers  
14 address that issue.

15 MR. ROTH-ROFFY: Okay. So, currently this  
16 Submarine Force in the Pacific is not, has not formally  
17 adopted or implemented --

18 CAPTAIN BORCHARDT: Is there a formal  
19 operational risk management program that addresses many  
20 of the things we do day in and day out? I don't  
21 believe so.

22 MR. ROTH-ROFFY: And the main reason I am  
23 asking is because the Court of Inquiry had that as a  
24 recommendation. They specifically said had ORM

1 procedures been used on that day, the accident may have  
2 been prevented. Now, would you agree with that?

3 CAPTAIN BORCHARDT: I would, I would say, it  
4 is my impression that the events of, I believe it was 9  
5 February, it is my impression that probably was not  
6 enough operational risk management exercised by that  
7 ship. And I say, you know, the focus has always been  
8 on Waddle, I would say by that ship.

9 MR. ROTH-ROFFY: Going back now to the  
10 development of the engineering standing orders. We  
11 have already had some discussion about it. I just  
12 wanted to kind of explore a little bit more, the  
13 guidance that is given to the engineering officer in  
14 preparing his standing orders. Are those, is that  
15 guidance or is that a requirement that his standing  
16 orders must contain certain procedures or certain  
17 requirements?

18 CAPTAIN BORCHARDT: I don't remember exactly  
19 what the guidance is for that. There is, there are  
20 several instructions that guide the technical,  
21 certainly the technical and procedural aspect of  
22 operational propulsion plant are requirements, that  
23 come out of Naval Reactors. The specific aspects of  
24 what will be in the night orders, does it, is it



1 specified what needs to be in there? I am not sure.  
2 Is there, is there, you know, this is, I know this for  
3 a fact, there is not, here is what you got, go ahead  
4 and sign it and initial your people and have your  
5 signature on there. I am not sure exactly.

6 MR. ROTH-ROFFY: Okay.

7 CAPTAIN BORCHARDT: That is a good question  
8 for me to look at.

9 MR. ROTH-ROFFY: Well, certainly if you are  
10 able to look it up, and get some information, we would  
11 certainly appreciate hearing from you.

12 CAPTAIN BORCHARDT: What I will do is, you  
13 all, you are going to be here on Monday. I am flying to  
14 Bangor, Seattle, tomorrow, where you, guys, came from.  
15 How cold is it?

16 MR. STRAUCH: It is nasty.

17 CAPTAIN BORCHARDT: It is nasty. Thank you  
18 very much.

19 MR. STRAUCH: I am sorry.

20 CAPTAIN BORCHARDT: Thanks for that. But,  
21 what I will do, is I will make sure that information is  
22 fed back to, are you going to talk to Captain Kyle on  
23 Monday?

24 MR. STRAUCH: Yes.

1 MR. ROTH-ROFFY: Yes.

2 CAPTAIN BORCHARDT: I will make sure that my  
3 force engineer officer, one of my three primary  
4 deputies, gets that information to Captain Kyle. I  
5 will do that when I leave here.

6 (Pause.)

7 CAPTAIN BORCHARDT: I am listening.

8 MR. ROTH-ROFFY: I was just giving you a  
9 chance there to finish what you are doing.

10 Regarding your current duties, what is your  
11 relationship with the Squadron Engineering functions in  
12 terms of oversight of maintenance and operation of  
13 submarines? How do you have your own responsibility or  
14 how does that work?

15 CAPTAIN BORCHARDT: Right. Each of the  
16 squadrons has a lieutenant commander squadron engineer,  
17 who works with the squadron deputies and the commodore  
18 works for, the commodore, I guess, I am sure there is a  
19 chief of staff in the chain of command there, but, that  
20 guys works for the commodore, and he corresponds very  
21 frequently with my forced nuclear trained guys. I have  
22 a commander, lieutenant commander and a couple of  
23 lieutenants and a couple of chiefs that deal with those  
24 types of issues. And so, they correspond a lot. In

1 fact, over the last couple of days we had all of them  
2 in town to talk through various issues and stuff, which  
3 we do on occasion. And this was, I think once a year  
4 or so. And it just so happened in the last couple of  
5 days it coincided with that. So, there is, that guy  
6 receives direction from his commodore boss. But, there  
7 is very close coordination between him and my nuclear,  
8 forced nuclear power officer and his staff. So that is  
9 probably the best way to put it. They don't work for  
10 him.

11 MR. ROTH-ROFFY: And how do your duties and  
12 responsibilities overlap and how are they different? I  
13 am just having a little difficulty understanding.

14 CAPTAIN BORCHARDT: How do they overlap? If  
15 there are technical problems or technical issues, with  
16 say, say there was a problem with a piece of equipment.  
17 That comes under the auspices of the ship, would tell  
18 their squadron engineer in parallel with telling us.  
19 We would be the main liaison with the right technical  
20 authority that would tell us how to solve this issue,  
21 which would be back through corporate headquarters,  
22 Naval Reactors, and that would come to us and then we  
23 would tell the squadron engineer, here is what you need  
24 to tell the ship. We agree with the plan, or we agree

1 with the plan, but they need to do this and this. So,  
2 we would be the main conduit, if you will, into the  
3 corporate Naval Reactors through my organization,  
4 through basically one third of my organization and, and  
5 that is how, it would be a lot of interface. But, I  
6 don't give direction, I don't give direction to the  
7 commodores. My forced officers do not give direction  
8 to the squadron engineers. We just, we work very  
9 closely together, but that chain of command is not  
10 broaden. It works with the commodore.

11 MR. ROTH-ROFFY: Okay. Does your organization  
12 provide any oversight function to the individual  
13 submarines?

14 CAPTAIN BORCHARDT: Oversight, we --

15 MR. ROTH-ROFFY: Operations or Maintenance --

16 CAPTAIN BORCHARDT: When you say oversight,  
17 from the standpoint of direction? There are a lot of  
18 systems of checks and balances in the business we have.  
19 And so, there are occasions when some of my, my  
20 officers or chiefs would go down to a submarine and  
21 monitor something. There are occasions when several  
22 other folks in supervisor positions as in the  
23 commodores or their deputies or squadron engineer,  
24 would go out and monitor evolution. So that oversight

1 is clearly there. Is it -- yeah. There is that  
2 monitoring aspect and if there were a problem that were  
3 found, that would go up through the squadron chain to  
4 say we have this problem, we saw this problem and then  
5 maybe take appropriate action. That is kind of how  
6 that would work, I would say.

7 MR. ROTH-ROFFY: So, would it be fair to say  
8 that you share oversight and supervisory roles with the  
9 squadron commander of the individual submarines?

10 CAPTAIN BORCHARDT: Well, it would be fair to  
11 say that the commodore is responsible and then if the  
12 CO of that submarine is directly responsible to him and  
13 not to me, is directly responsible to him and not to  
14 some of the other, the shipyard commander, if you will,  
15 the shipyard commanders work on. His, his, he works  
16 for, I think is clearly delineated. It is his chain of  
17 command --

18 (End of Tape 1, side B.)

19 MR. ROTH-ROFFY: Okay. If you could go ahead  
20 and finish your thought, if you remember where you left  
21 off.

22 CAPTAIN BORCHARDT: Why don't you repeat the  
23 question?

24 MR. ROTH-ROFFY: Actually my question was

1 quite awhile ago, but I was just asking you if you had  
2 shared, I believe my last question --

3 CAPTAIN BORCHARDT: Oh, oversight. Oversight.

4 MR. ROTH-ROFFY: If you shared responsibility  
5 for oversight in submarines.

6 CAPTAIN BORCHARDT: I think, first of all,  
7 throughout the submarine program, if you will, it  
8 relies on checks and balances. And that is because in  
9 our business, there are significant consequences for  
10 single point failure. So, when you say, when you talk  
11 oversight, the CO of the ship is responsible to the  
12 commodores, directly responsible to him. But, there  
13 are various systems of checks and balances where people  
14 are looking for issues and problems. As I said,  
15 sometimes my folks do monitor watches. When I ride a  
16 submarine, I go around and look at how they operate.  
17 And I report those results back to the commanding  
18 officer before I leave the ship. I think every senior  
19 rider that goes out there and rides on a submarine,  
20 does the same thing. Anybody with any experience  
21 would do the same thing. I think you have a problem  
22 in this area. I think this is really good. Probably  
23 could look at making sure that you and/or this guy is  
24 looking closer in this area. So, from the standpoint

1 of oversight, I think there is a series, if there is a  
2 problem that occurs and we are going to formally get  
3 the folks and let's talk through it and figure out what  
4 happened. People come in, not just from the ship, but  
5 from the squadron or possibly from us, who would sit  
6 down and contribute, make sure the right questions are  
7 asked. Is that oversight? I would say it is zone  
8 defense, which is what we do in a lot of things.

9 In the subsafe program on a submarine, there  
10 are many things that we operate and position that, or  
11 maintenance that we do, there are very specific  
12 controls on that and checkups, check and backups and  
13 things like that. When we rig the submarine for dock,  
14 and we operate the submarine, one guys does it, another  
15 guy comes on and checks it. When we tag out an  
16 electrical component for work or a hydraulic component  
17 for work, one guy looks at it, first of all there is  
18 verification of what are the right boundaries, two  
19 people. And then in the hanging process there are two  
20 people. They don't do it at the same time, they do it  
21 at different times to make sure the first guy didn't  
22 make a mistake, because the ramifications of a mistake  
23 are flooding on the ship or like a computered sailor,  
24 or the, the costs are just too high.

1                   So, I would say the whole program is based  
2                   on, not necessarily everybody having oversight of  
3                   everybody else, but clearly a lot of eyes looking, a  
4                   lot of zone defense. And that is when you want to get  
5                   back to, when you asked me the question about Waddle,  
6                   you know, what did he do wrong? I step back and say,  
7                   there is a fundamental principal of backup, force, team  
8                   work, not letting one person kind of lead us down the  
9                   wrong path. And I would say that is an area that in  
10                  my mind clearly we had a problem there. Having not  
11                  been directly involved in the investigation, but my,  
12                  from my distance. Once again, I wasn't here when this  
13                  all occurred. And I was at the Pentagon at the time,  
14                  but, okay.

15                 MR. ROTH-ROFFY: Yes, thank you for that.

16                 Barry, I think that is about all I have. Do  
17                 you have any follow up questions?

18                 MR. STRAUCH: Yes, just one more.

19                 Can you tell us how you got into submarines?  
20                 Did you know you wanted to be on submarines when you  
21                 entered the Naval Academy?

22                 CAPTAIN BORCHARDT: No, no. In fact, I was  
23                 very close with four other folks and so there were five  
24                 of us real close, my two roommates and my other two



1       roommates went into aviation and, and they, they almost  
2       talked me into going aviation, being a pilot, because  
3       that was kind of cool back then.    I have always been  
4       the type where I have done well in school, and I always  
5       look for the opportunity, if you will, to enhance my  
6       education.   So, I, you get the opportunity to go out  
7       and ride on a submarines as a midshipman, and kind of  
8       get the feel for is that something I might want to do.  
9       My senior year, between my junior and senior year at  
10      the Naval Academy, I rode on a submarine for a month  
11      out of San Diego, and I really enjoyed it.   And so,  
12      the process allows you at least in that vein, and I  
13      think it does with the other officer commissioning  
14      programs, allows you to kind of experience that, to see  
15      if that is something you might want to do. I had a good  
16      experience that summer.   So, I resisted the temptation  
17      to go Naval Aviation, or Marine Corps, both my older  
18      brothers were Marines.   And decided that that is what  
19      I wanted to do and I have had no regrets.   I knew that  
20      I was going to stay in the Navy after I graduated for  
21      five years, because that was my obligation.   And here I  
22      am 27 and a half years later and I have no regrets.   I  
23      have had a great tour, a great, great career.   Nothing  
24      in the world beats command at sea.   And I really have

1       enjoyed it. I really enjoy what I am doing. I like  
2       working with kids. The military has a lot of really  
3       good motivated people. There is a lot, you get your,  
4       you have your problem kids anywhere you go, and in what  
5       you do. But, especially in this day and age right now  
6       of some many things our country is going through, to  
7       see young motivated kids going out there and also  
8       putting it on the line, going in harms' length and  
9       stuff and really pulling together as a team. It helps  
10      validate your life's profession. Eventually I will end  
11      up having to go out and get a real job somewhere, but,  
12      so far, I have been pretty lucky.

13                Just, my father was a Navy, a career Naval  
14      person, but he was a chief boatswain mate in charge of  
15      deck stuff. So, I realized, I didn't want to be a deck  
16      guy because my dad would smack me around and say, no,  
17      you are not doing that right, so I did something that  
18      was totally different from him. Smack me around is  
19      figuratively. Okay.

20               MR. STRAUCH: And how did that, did that play  
21      a role in your going into the Naval Academy to begin  
22      with?

23               CAPTAIN BORCHARDT: Nope, no, I knew I wanted  
24      to go the Naval Academy. I knew I wanted to try that

1 as a profession, as I said, my father was career Navy  
2 man. But, I didn't go into the Naval Academy thinking  
3 I was going to be in the Navy for 30 years. I went in  
4 there saying, I like that, that thought process, I  
5 mean, Vietnam War was going on, when I went in '70. And  
6 it was getting really hot and heavy at that time. So,  
7 I said, you know, if you are going to be involved in  
8 something with this whole thing, why not go do it as an  
9 officer and get education out of it. And so it was, it  
10 was something I really wanted to do. I just didn't  
11 know how long I was going to do it. I liked it for a  
12 summer, for a month. I said, I can invest five years  
13 into anything and with what is going on in the world,  
14 it is probably, it is a noble profession. I mean that  
15 without sounding corny. It has been, it really has  
16 been a good, feel good about what you do when you wake  
17 up in the morning. You have your frustrations,  
18 certainly you have your frustrations. I mean, the  
19 longest I have been under water at any given time is  
20 60, 90 days. You get frustrated under way for over two  
21 months. But, I have never regretted it.

22 MR. STRAUCH: What happened to your roommates  
23 who went into Aviation?

24 CAPTAIN BORCHARDT: One guy stayed in for a

1 career, and retired about three or four years ago as a  
2 captain like I am. He got out a little early. And the  
3 other guy stayed in for six, seven years, got out and  
4 became a sports writer for a newspaper in Fort Myers,  
5 Florida. And I would have bet the farm if somebody  
6 told me that is what he was going to do for his life's  
7 vocation, but I would have bet the farm against it.  
8 There you go, you just never know in this world.

9 Can I reiterate a couple of things?

10 MR. ROTH-ROFFY: Certainly.

11 CAPTAIN BORCHARDT: Back from this thing, just  
12 to clarify, I know because, you know, this is, talking  
13 to the NTSB, sometimes it is hard to understand exactly  
14 kind of how things are played out. But, yeah, I really  
15 do want to get back to the issue of, you know, you said  
16 something that really kind of got to me a little bit  
17 about the two different types of standards on a  
18 submarine. I absolutely do not think that is the  
19 case. There really, it really is important to  
20 understand that there are, you know, not everything is  
21 in auto in the propulsion plant, but this is 50 some  
22 years of design, exact procedural, that didn't work,  
23 let's fine tune it in a formal way, and we will fine  
24 tune it again and it is just, you grow upon something

1       where it is just so, it is so clear back there. And  
2       even if, when, we do causality response training, there  
3       is predicted response during that. And so, you have  
4       superbly trained people, hand picked people, in the  
5       propulsion plant system, not multiple contacts bouncing  
6       around, do I have one here, do I have one there, what  
7       is the issue. It is a very exacting. And so, the way  
8       the system has developed is very, is very, very  
9       specific on the reactor and propulsion plant and that  
10      is over 50 years of experience and the development,  
11      technological developments and how they have come  
12      along. Many developments of old. I just, my personal  
13      opinion is, there is still gray areas there.

14               And then the issue of ORM, I think, it is a  
15      very valid one because nothing is absolute. You can do  
16      every thing perfectly in driving that ship, and still  
17      have a problem, because the sound was bending this way  
18      instead of that way when you were listening to it. And  
19      actually, there was a duck dangle, or a thermal effect  
20      or when you are dealing with sonar and we have very,  
21      very capable systems and things like that, things are  
22      not exact in our business. I guess is kind of one way  
23      to put it. But, just emphasize the foundation for the  
24      ship drivers that we grow up in this business, they are

1       founded in Navy Nuclear Propulsion Program, and they  
2       are gaited all the way along as part of that. So, you  
3       never ever stray far from that philosophy in anything  
4       you do, in this business. As I said, there are a lot  
5       of procedures that are identical between the two.

6               Some procedures may be done that lend  
7       themselves to be identical, you know, in that business.

8               Okay. Anything else?

9               MR. STRAUCH: Not from me.

10              MR. ROTH-ROFFY: I don't believe so. So, the  
11       time is about 15:15 and that concludes our interview of  
12       Captain Borchardt. Thank you very much, sir.

13              CAPTAIN BORCHARDT: You are very welcome and  
14       thank you.

15              (Whereupon, the interview was concluded.)